

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Investigation pursuant to Senate Bill 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility located in the County of Los Angeles while still maintaining energy and electric reliability for the region.

Investigation 17-02-002
(Filed February 9, 2017)

**COMMENTS OF
MAGNUM ENERGY MIDSTREAM HOLDINGS, LLC
ON FINAL PHASE 1 SCENARIOS FRAMEWORK**

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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	HYDRAULIC MODELING.....	4
A.	Hydraulic Modeling: Introduction	4
B.	Reliability Assessment: Simulations Inputs.....	5
C.	The Feasibility Assessment.....	7
D.	Potential Future Analysis	7
III.	CONCLUSION.....	8

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In accordance with the Administrative Law Judge Semcer’s September 14, 2018 ruling,¹ Magnum Energy Midstream Holdings, LLC (“Magnum”) hereby submit these comments on Energy Division’s *Scenarios Framework: Investigation (I.) 17-02-002* (“Final Proposal”).

I. INTRODUCTION

Magnum is a Utah limited liability company formed in 2017 to develop the Magnum Gas Storage project, a 40 billion cubic feet (“Bcf”) high deliverability, multi-cycle (“HDMC”) salt cavern natural gas storage facility near Delta, Utah and adjacent to the Intermountain Power Project. On June 27, 2018, magnum announced an open season for the Western Energy Storage and Transportation Header Project (“WEST Header Project”), a new 650-mile large-diameter interstate natural gas pipeline designed to move natural gas bi-directionally between multiple receipt points and multiple delivery points, including the Magnum’s gas storage facility in central

¹ *Administrative Law Judge’s Ruling Entering into Record Energy Division’s Final Phase 1 Scenarios Framework, Requesting Comment and Setting Procedure to Request Phase 1 Evidentiary Hearings*, September 14, 2018, at 4.

Utah, throughout multiple states in the Western Energy Corridor.² Magnum is very encouraged with the feedback received in the WEST Header Project open season and is currently in discussions with potential shippers.

Western U.S. energy markets are currently undergoing a significant paradigm shift. This change is being driven by several factors, including aggressive solar and wind capacity development in the Western Interconnection, increasingly tighter pipeline balancing requirements, long-term reliability issues with existing infrastructure, hydroelectric uncertainty, and early retirements of coal-fired and nuclear power plants. Additionally, as producers of Rockies natural gas seek new domestic and international markets, including potential West Coast LNG exports and exports to Mexico, the need for strategically located deliverability options is becoming increasingly important. The WEST Header Project will provide true bidirectional, intra-day, no-notice, hourly load following, peak hour supply reliability and traditional storage and transportation service to meet the current and future hourly demands of the Western Energy Corridor.³

Magnum anticipates the WEST Header Project will accommodate natural gas receipts and deliveries directly into: (1) the Salt Lake City Valley at or near the Opal Hub; (2) the Goshen Hub; (3) the Las Vegas, Nevada, market; (4) the Southern California market (through Needles/Topock/Blythe/Ehrenberg); and (5) the Phoenix/Tucson, Arizona, market. It will also

² In accordance with Section 368(a) of the Energy Policy Act of 2005 (“EPAct”), the U.S. Bureau of Land Management (BLM) designated 5,000 miles of energy corridors (commonly referred to as “Section 368 energy corridors” or the “West-wide energy corridor”) for potential placement of future oil, gas, and hydrogen pipelines and electricity transmission and distribution infrastructure. Collectively referred to as the Western Energy Corridor, these corridors are considered preferred locations for energy transport projects on BLM-managed lands and are intended to facilitate long-distance transport of oil, gas, or hydrogen via pipelines and transmission and distribution of high-voltage electricity via transmission and distribution lines. More information about the Western Energy Corridor is posted on BLM’s website at <http://www.corridoreis.anl.gov/>.

³ For more information on Magnum’s WEST Header Project, please visit www.westhp.com.

facilitate potential international exports to Mexico at Yuma, Arizona, and West Coast LNG exports, including via Energia Costa Azul near Ensenada, Baja California, Mexico. Depending on the availability and flexibility of firm capacity on SoCalGas' backbone transmission system, Magnum anticipates the WEST Header Project, in tandem with Magnum's gas storage facility, will be able help mitigate lost Aliso Canyon deliverability.

In informal comments on the previous draft of Energy Division's Scenarios Framework, Magnum raised two major concerns about the proposed framework: (1) it had built-in assumptions about the operational capabilities of the Southern California Gas Company ("SoCalGas") system that are overly optimistic; and (2) it made no provision for modeling the potential reliability benefits from utilizing independent gas storage and storage-based services to help mitigate lost deliverability from the Aliso Canyon storage facility.

Magnum was pleased to hear at the July 31, 2018 workshop that parties will have the opportunity in Phase 2 to propose additional scenarios for modeling, including the addition of new infrastructure like Magnum's WEST Header project that could potentially mitigate the loss of Aliso Canyon deliverability. That addressed Magnum's second concern, and Magnum plans to present an additional scenario in Phase 2 based on development of the Magnum Gas Storage and WEST Header projects and scenario at the proper time. Magnum only repeats here its request from the workshop that the Commission provide further guidance, the sooner the better, as to when and how parties should present their proposed scenarios for additional modeling.

Magnum was also pleased to see that the Final Proposal rectifies some of the overly optimistic assumptions from the previous draft. Magnum still has concerns, however, about certain assumptions and other elements of the Final Proposal. In these comments, Magnum identifies those remaining areas of concern and recommends relatively minor changes to the Final Proposal to address them. For ease of reference, Magnum's comments are organized in the order

and under the headers used in the Final Proposal.

II. HYDRAULIC MODELING

A. Hydraulic Modeling: Introduction

In the introduction to the section on hydraulic modeling, the Final Proposal states that “it is possible that a nearby underground storage facility such as [Playa del Ray] or Honor Rancho or other solutions may be able to substitute for the reliability role that Aliso historically provides.”⁴ It is highly doubtful, however, that either Playa del Ray (“PDR”) or Honor Rancho can substitute for Aliso Canyon.

PDR is much smaller than Aliso Canyon, and after PDR’s limited inventory is exhausted it takes at least a few days for it to be replenished.⁵ In contrast, SoCalGas has historically been able to draw heavily on Aliso Canyon’s inventory for several days on end. While it may be reasonable for purposes to the planned Reliability Assessments to assume PDR is “at maximum storage capacity and can supply the corresponding maximum withdrawal rates on any peak day,”⁶ the Final Proposal itself acknowledges that “[i]f alternative scenarios are considered that span more than one day, the availability of maximum withdrawal rates at PDR come into question, and this assumption should be revisited.”⁷ Given the prevalence of multi-day stress events on the SoCalGas system, Magnum submits it would be unreasonable to conclude PDR can substitute for Aliso Canyon in the real world, no matter what the modeling results may show.

⁴ Final Proposal at 7.

⁵ *Id.* at 13.

⁶ *Id.*

⁷ *Id.* at 14.

It is likewise doubtful that Honor Rancho can substitute for Aliso Canyon, given not only its relatively limited capabilities and the constrained transmission capacity from Honor Rancho into the Los Angeles basin. Indeed, as the Final Proposal notes elsewhere:

[T]he full withdrawal capacity of Honor Rancho may not be achievable because it competes with gas receipts from Wheeler Ridge for pipeline transportation capacity. If both Honor Rancho storage withdrawal and Wheeler Ridge receipts are maximized, pipeline pressure would exceed the maximum allowable operating pressure, which would violate safety and compliance requirements. Under the stressed conditions of the Reliability Assessment, it is reasonable to assume that the combination of Wheeler Ridge receipts and Honor Rancho withdrawals will always be pipeline transportation limited and the available aggregate supply from these sources is determined by this limit.⁸

Notwithstanding the shortcomings of Playa del Ray or Honor Rancho, there are other potential solutions that could substitute for Aliso Canyon. One such solution is the highly flexible intra-day storage-based reliability services that the WEST Header Project could potentially provide to SoCalGas and large shippers on the SoCalGas system. It is thus imperative that the Commission allow for additional scenarios to be proposed and modeled in Phase 2.

B. Reliability Assessment: Simulations Inputs

In the section on hourly gas load profiles, the Final Proposal provides:

To generate the shape of gas demand (*not* the peak level) CPUC staff will collect smart meter data for a whole year for each zip code served by the utility company. Then, for each month of the year, the day that corresponds to the highest total daily core gas demand will be selected as a representative shape for the extreme peak demand (i.e. 1-in-35). In addition, the third highest daily demand will be selected as a representative shape for the peak demand (i.e. 1-in-10 or 90 percentile level). Those shapes will then be scaled upwards to match the forecasted peak levels from the California Gas Report for the appropriate future study years.⁹

⁸ Final Proposal at 14.

⁹ *Id.* at 12.

Magnum is concerned that using different load shapes as described above will produce artificially low demand inputs for the Reliability Assessments for the 1-in-10 standard. This is particularly true given that “recent years [i.e., the time period when smart meter data first became available] have not been as extreme in temperature.”¹⁰ Moreover, as the Final Proposal correctly notes, “The most important shape metric is the maximum ramp rate (mathematically termed maximum slope or gradient), which translates to sudden increases in gas demand, and will therefore affect the performance of the pipeline network.”¹¹ Since both standards are intended to reflect peak demand conditions, differing only in the intensity of the peak, Magnum believes the core load shape used for both analyses should be based on the load shape for the highest monthly peak day, with the only difference being the extent to which the hourly demands are scaled up.

In the section on outages, the Final Proposal provides:

The months with the most severe operating conditions are well known, and planned outages can usually be scheduled to occur outside of these months. However, unplanned outages are frequent enough that they must be accounted for in the gas system modeling for the Reliability Assessment. A key factor is the number of concurrent unplanned outages on a peak day, the location of these outages, and the severity of the outages. For the Reliability Assessment, we propose that the gas pipeline system be subject to a single plausible unplanned outage (pipeline or storage) that results in the maximum loss of aggregate gas send-out.

In its informal comments on the previous draft of the Scenarios Framework, Magnum recommended that a “planned+unplanned outage” (“P+U”) scenario be run as part of each Reliability Assessment. Magnum reiterates that recommendation here. While the Final Proposal is correct in observing that planned outages can “usually” be scheduled outside peak months, that is not always the case, as evidenced by the extended outage of Line 3000 for unplanned

¹⁰ Final Proposal at 12, fn. 7.

¹¹ *Id.* at 12.

maintenance. Indeed, given the stakes, it would be pollyannaish to not run a P+U scenario to stress test the limits of the SoCalGas system's capabilities without Aliso Canyon.¹²

C. The Feasibility Assessment

In its informal comments on the previous draft of the Scenarios Framework, Magnum recommend that Energy Division clearly state that a Feasibility Assessment will be performed in every case where a Reliability Assessment identifies a minimum inventory level that exceeds the storage capacity on SoCalGas' system without Aliso Canyon. The Final Proposal now states, "Once the Reliability Assessment is complete, *one must investigate* whether the minimum storage schedule is feasible to achieve. Therefore, the next step in the analysis is a Feasibility Assessment."¹³ Although the Final Proposal does not use the exact language Magnum proposed, the aforesaid excerpt seems to indicate that a Feasibility Assessment will be conducted in all such cases. If that is not the case, Energy Division should either clarify the Final Proposal or explain why it continues to believe that a Feasibility Assessment will only be optional in such cases.

D. Potential Future Analysis

The Final Proposal provides:

The Reliability Assessment may return a result that does not meet the required natural gas delivery performance, even when implementing the full set of allowable operational actions. In this case, the Reliability Assessment will provide insight into any unmet criteria or bottlenecks preventing the gas system from operating reliably with or without Aliso Canyon storage field.

In a future analysis, a sensitivity analysis may be performed to estimate what additional actions or alternative operational actions may be taken beyond the

¹² Magnum recognizes that it may be superfluous to do a P+U run where a Reliability Assessment identifies a minimum storage requirement that exceeds the non-Aliso Canyon storage facilities' collective capacity. It should always be done, however, where a Reliability Assessment does *not* identify a minimum storage requirement.

¹³ Final Proposal at 19 (emphasis added).

set of operational actions defined by the reliability standard to reduce the minimum storage requirement at Aliso Canyon to zero.¹⁴

Magnum is concerned that the above passage may prejudice and unreasonably limit the scope of any such additional scenarios. If by “additional actions or additional operational actions” the Final Proposal intends to exclude third-party storage-based reliability services such as those that could be provided by the WEST Header Project, that would be contrary to Magnum’s understanding of the remarks made from the dais at the July 31 workshop. Magnum therefore requests that the Energy Division revise the Final Proposal to allow for additional scenarios along the lines of what Magnum intends to propose in Phase 2 or, alternatively, the Commission make that clarification in the Scoping Memo for Phase 2.

III. CONCLUSION

Magnum appreciates this opportunity to comment on the Final Proposal and hopes the Energy Division will implement the refinements to the Scenarios Framework discussed above.

Respectfully submitted,



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¹⁴ Final Proposal at 24-25.